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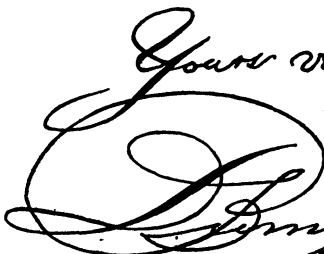
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## TABLE OF CONTENTS

|                                                                                                |             |
|------------------------------------------------------------------------------------------------|-------------|
| <b>EDITORIAL—</b>                                                                              | <b>PAGE</b> |
| Progress, Regardless of Language or Tint .....                                                 | 85          |
| <b>ORIGINAL CONTRIBUTIONS—</b>                                                                 |             |
| The Professional Man's Ideals. By D. A. K. Steele, M.D., LL.D., Chicago...                     | 91          |
| Restoring Lost Dental Tissue. By W. S. Bennette, B.D.S. (Liverpool), L D.S.<br>(England) ..... | 95          |
| Diet and Teeth. By Dorothy Richardson' .....                                                   | 98          |
| Dentists Should Study the Heart. By D. R. Kendall, M.D., L.D.S.....                            | 103         |
| Success in Dental Practice. By Dr. C. N. Johnson.....                                          | 105         |
| Comment.....                                                                                   | 107         |



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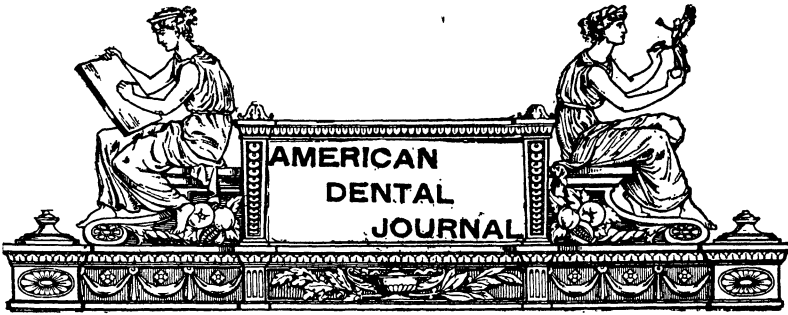
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April 15

EDITORIAL AND COMMENT

1914

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### PROGRESS, REGARDLESS OF LANGUAGE OR TINT\*

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In the results of arts and the products of sciences there is no recognition of the color or tint of a man. In the arts and sciences we do not say, "Where were you born?" We simply ask, "Do you know the truth when you see it?" The music in Germany, the music in Spain, the music in Italy, the music in the United States, is of the same great science and art. Music is a science over there just as much as it is at home. Therefore we as a profession should welcome new ideas and higher ideals, regardless of geographical boundaries.

There are other people, besides United Statesians, who are thinking about new things. There are other races battling with these very problems. I remember that I saw something in a

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\*Banquet address at the Southern Michigan Dental Association.

WE  
WELCOME  
THE  
WORLD'S  
PROGRESS





museum in Berlin that made me stand and silently pay my compliments to Japanese dexterity. When it comes to porcelain work; when it comes to the work of fineries, either in ivory or metals, they are high on the pinnacle of digital dexterity; and the world, whether it wants to or not, will continue to take off its hat to old Japan, because with her fingers and with her brains they work with that infinitesimal nicety—and they stick to it through generations. Families upon families are trained to work in a particular line, and from father to son for hundreds of years they go on in this way. I was told in that Berlin museum one family would be trained continuously along a certain line of metal or porcelain work, and it would be thrown entirely with their home life, with their very soul, in that one direction.

Let us take a cue from this principle of inheritance. We can not progress rapidly while we waft around from one side to the other. We are so changeable. One day we use porcelain, and we are all enthusiastic over it, and we say, "Porcelain everywhere." Then, five years after that, we say, "Gold inlays," and we forget the porcelain; then we all rush home and say, "Gold inlays everywhere." Next a man comes to a clinic with a new artificial tooth of some kind, and we rush home and say, "Change the bridges; remove the old bridge and insert the new forms." Now, go just a trifle slowly in accepting the latest, for the latter is not always the best. Remember, too, that our patients are not to be experimented with too freely. Let the free clinics at infirmaries experiment, for the public anticipates protection, even in most rapid progress.

There are good things in porcelain. We do not wish to discard porcelain; there are places for porcelain. But the man who insists that every broken-down tooth should be built up with porcelain is charged with overenthusiasm, and is just as great a danger to progress as the one who wilfully seeks to retard it. We must have a middle ground supported by logic. We must stand for true progress, and not mere change. There are places for the gold inlay; there are places for gold in the mouth, set with the ordinary hammer and mallet pressure, and there are places where porcelain is absolutely and insurmountably

the best of all. Because why? If we are artists, and if we want to have the world recognize us as broad men of our science, we must remember this one thing—that the human family is our jury. They don't care how the thing is done; whether it makes much work or whether it makes you little work; whether the place you make it is warm or hot, or whether the place you make it is cold and dismal and you are freezing. The public generally simply wants the goods; and the man that delivers them is the man that gets the price.

I want to say that I saw in Dresden a dentist who got things in porcelain that absolutely astonished me, because he had faith in his art. What is more nearly like nature in teeth than porcelain? That is true art, of course. Let us not forget to view the substance of these things.

In connection with that let me call your attention to the fact that I believe that the porcelain, as we bake it today, is too glittering. It shines too much. It reflects too intensely. The tooth in the normal mouth is inclined to be dull; and when you put an impression take it back, so as to get a contact with the real thing, the true thing—the true thing is always the best thing. When you place the Logan crown on the lateral teeth, after being worn in the mouth for some months, you will find that the natural teeth are very dull—do not reflect the light. Whereas, the porcelain tooth that stands beside it, which does not collect the debris of the mouth, remains brilliant and shining, and will not advertise itself on the surface. Now that porcelain is too bright, too glittering, too smooth; and if these porcelains were treated, possibly, with hydrofluoric acid, or if we understood the principle of baking them better, or could make them more soft, more waxlike and more natural, the porcelain inlay would still be a greater thing than it is.

Some say it is a question of cement. I have seen some of the best cement workers in the United States that had the exact shade that was required to treat that inlay cavity, and, lo and behold! when the last little thing was done, the placing it in position with cement, all had passed away, and they sat back and said: "Well, it is too bad! It was splendidly matched;

and now since it is in the mouth something has changed it." What has changed it? Why, the method of attachment. I think the method of attaching these things with cement is a mistake. I think the time is coming when we will attach our gold inlays and our porcelain inlays with some fluid—possibly in the form of a resin. I think the resin which violinists use is, by far, better than cement. I don't know but what I am—like a good many others here—just groping around in the dark; because I sometimes feel that I have made a failure of a thing when it is a success, and that I have made a success of a thing that is a failure. So, with all this groping around, we have a fair chance of success. I have used resin for score of years.

I do not believe in using one definite thing all the time—a Logan crown all the time, a Richmond crown all the time, or any given thing all the time. That is not a part of our art. It is a matter of judgment in knowing when to apply certain things.

Suppose a man who is building a piano would say, "Always put in a nail here, or a screw here, or a tack there." They do not do that. There are some places in a piano where they use a nail; there is a certain place where they use a tack, and there is a certain place in a piano where they even use a dove-tail, and there is another place in a piano where they use glue; then there is another place in a piano where they use steel within steel. Now that is a lesson for us, because that is what dentistry is. Everything must have a place, and everything must find that place by sheer judgment of the individual. Therefore I say most of these things have their places, and we must train our judgment to understand them.

On the subject of shade let me add another thing in reference to porcelain. In front teeth or a bridge do not take the naked or nascent porcelain tooth and put it in the patient's mouth the end or back piece by the fingers or a pair of pliers; take that tooth back of it, and when you intend to use gold you can use a piece of brass, having enough brass to stick over the edge, so that you have not got the tooth in your hand and you have got a hold of the brass; hold the tooth where you

want it with the brass, and you will get exactly what the tooth will look like when it is baked up and put through the fire. Or, if you don't like that, you can take some gilt and back up the tooth with that, and it will give you the same result. By this method you will know exactly what the tooth will be when you have the finished product.

We as a profession are, if we are anything at all, a liberal school. We are, if we are anything at all, seeking education, and these gatherings are primarily post-graduate schools.

I might say one word in conclusion. Let us not say a thing is dead and gone because you can not use it. Some believe, as a matter of psychology, that you can make a success of anything. I do not believe that. I believe that there are some men who are born violinists, and I believe there are some men who never in God's world—not in a thousand years—have the rythm, the feeling and the soul to play a violin, if the Lord allowed them to be taught for a thousand years. We are born for certain things. If one man has a handicraft with a mallet, and another man can feel in his fingers, and another man can do certain distinct things, let's hold them up and cheer them on, because they are a blessing to mankind—because they stick to a principle, and are the men that make the world the success that it is.

If you see a dentist who has a talent for a certain phase of dental art, encourage him, and do it with some vim. If some man in the profession demonstrates a superior ability in some special direction, do not let your envy chill your feet, but permit your admiration to warm your heart; then take a deep breath to reinforce what little courage you may have, and tell him something that may lend strength to his possibly faltering inspiration. Do not be afraid to encourage. Do not be too economical with your praises. Get a little rise in temperature in your "good-will" cells, and the world will grow more beautiful, and you will enjoy the improvement.

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# ORIGINAL CONTRIBUTIONS

## THE PROFESSIONAL MAN'S IDEALS

BY D. A. K. STEELE, M.D., LL.D., CHICAGO,  
Member of the faculty of the University of Illinois

[The following eloquent address was delivered to the graduates of the University of Illinois College of Medicine, and is filled with so much logic, encouragement and advice that it is given our readers as a sermon.—EDITOR.]

[Continued from page 64 of the March issue.]

The first element of success is contentment. To succeed you must be in love with your profession; you must have a high conception of its aims and objects; you must idealize your work. Your motive should be the love of science, or the instinct of investigation; the love of service; the desire to search out the secrets of nature, and to alleviate human suffering. The ideal young professional man should be a composite picture, blending in his makeup perfect health, mental vigor, honor, honesty, self-reliance, courage and conscience, with a devotion to high ideals and an unwavering self-confidence. Then he can look the whole world in the face and say: "Come on, fellows! I am ready for a tussle with you." The true man and the true woman is a mosaic, and not a single gem.

Ideals change, but there must be a permanent good—a lasting, beautiful, and an unchangeable truth. The ideal beauty has not yet come in painting, or statuary, or music, and I sometimes think it never will come this side of the dawning of the millenium, unless we stick closely to the ideals of youth, and home, and innocence, and purity. If there is one thing more than another that blights the future of many a brilliant and promising young doctor, it is the curse of acquiring a taste for stimulants or drugs that enslave. Many of the brightest minds in our profession are wrecked annually by the vice that attacks simultaneously the money, body and brain of its victim. It leaves nothing untouched.



KEEP NEAR TO NATURE

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The passion for strong drink blights the young man's world, and leaves just enough of memory to catch a mother's tears, a sister's sorrow, or a wife's anguish.

Swing says: "Man can be good and happy without fortune and without fame, but he can not reach any good in the path of the drunkard."

But for the ravages of intemperance and the universal nuisance, tobacco, the men of today would surpass their forebears physically as well as intellectually. The world demands a doctor who is educated all over, whose heart is tender, whose hand is steady, whose eye is clear, whose tongue is clean, whose brain is cultured, whose nerves are under perfect control—one who is broad-minded, and who does not look at disease through the narrow view of the specialist, who sees only from his own field of vision. It wants a man whose knowledge of disease has been broadened and deepened and enriched by a wide and varied experience in professional practice and sharpened and polished in some specialty afterwards; a man who mixes common sense with knowledge and book learning; who has a heart swelling with sympathy for the poor sufferers who seek his aid; who carries a smiling face on his errands of mercy; who prefers substance to show, and who regards reputation as a precious treasure, to be guarded against the allurements of modern society or the tempting bait of gold offered for the prostitution of his talents to the performance of illicit or illegal practices. It demands that he shall possess that innate monitor called conscience. It takes moral courage to stand up for a principle; to put the success of a cause or an institution before self; to sacrifice personal ambition on the altar of community of purpose; to cut loose from old friends or associates for the sake of devotion to duty.

Enthusiasm is a very essential qualification for success. Enthusiasm is the charm, is the blush upon the fruit, the tint upon the flower. Have every other quality needed for success, and then add enthusiasm. It is the electric current that makes the world move and turns the wheels of progress. It gives life and energy. It kindles the eye, it gives a sympathetic hand-

clasp, and puts good cheer into the kind word spoken at the sick bed. It is the young doctors with push, energy and enthusiasm who make medical history. He compels the world to honor him for his true worth, and to accept him for what he really is—ofttimes a real hero.

Who experiments? Who initiates new methods of treatment? Who invents new instruments and surgical appliances? The recent graduate. He it is who is bringing about the wonderful revolution in the treatment of disease by the use of the opsonic index; by the introduction of autogenous vaccines, of biologic serum-therapy; by a scientific multiplication of the antibodies in the building of immunity or resistance to disease in the individual threatened by tuberculosis, tetanus, typhoid fever, diphtheria, or any of the saprophytic infections, or so-called germ diseases. He it is who has made residence in the tropics safe by eliminating mosquitoes, the carriers of yellow fever germs, and thereby made the building of the Panama canal possible.

The indomitable will, the inflexible purpose, will find a way or make one. There is always room for a man of force. The dogged persistence of a Grant, who would "fight it out on that line if it took all summer," succeeds in the face of all difficulties.

Every lecture, every clinic, every patient, every responsibility, every business transaction, is an opportunity. Make the most of them. The lack of opportunity is ever the excuse of a weak mind. Give as much care and attention to the examination and diagnosis of the case of a pauper as you would to a wealthy patient.

Let your motto be that of Chicago, "I will", and the whole world can not turn you back. Resolve upon a course of action and follow it up to its ultimate conclusion. Turn not to the right nor to the left. Keep your eye fixed upon the goal of your ambition and your success is assured. Too often we hear young doctors say: "If I only had the opportunity; if chance would only put something in my way."



## RESTORING LOST DENTAL TISSUE

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BY W. S. BENNETTE, B.D.S.(LIVERPOOL), L.D.S.(ENGLAND)

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[Some practical ideas and good methods of operative and prosthetic procedure can be gained by following this English suggestion. The illustrations are from original methods. The variety of coronal or occlusal restorations will interest all progressive dentists.—EDITOR.]

[Continued from page 35 of the February issue.]

In this specimen there is no implication of pulp, the incisive edge is made flat, with, however, an incline from lingual to buccal; a piece of porcelain is easily fitted to this flat surface and further ground to the required contour; a groove also is made on its upper surface, the whole of which will be subsequently protected by gold. Having trimmed the porcelain to correct form, further attention is paid to the tooth. Two lateral grooves (square in section) are prolonged from the flat surface just internal to the marginal ridges to meet at the cingulum, where a deep cut parallel to the walls of the lateral grooves is made (a deep cut because away from the pulp). The lateral grooves are joined very superficially, thus making the gold backing stronger. If care is taken that no porcelain is gripped by gold (the cause of so much cracking), it can pass through the firing, I believe, with safety.

This is a specimen showing a combination of cast gold and porcelain inlay. Its technique is as follows: Having prepared the cavity as for a gold inlay (in this case a devitalized tooth, and thus having a post up the root), the contour destined to be restored by porcelain is built up with calcine or inlay investment with a little salt, and carved to the shape required, care being taken especially with the back, the shape of which will become evident by examination of the specimen as finished. A wax matrix is now taken and cast, giving the result as here shown cemented in the cavity. The aperture represents the shaping of the calcine.

The next step is to treat this as an ordinary cavity to be inlaid with porcelain, which, I think, should be capable of with-

standing a good deal of strain, but should the porcelain fracture it is not a very lengthy repair.

Pivot, ordinary porcelain faced crown with platinum pins.  
Steele's facing on badly decayed root.

Tube crown. Logan crown. Davies' crown.

Ordinary porcelain-faced crown with platinum pin tooth.

No special mention need be made about this crown except that to avoid fracture during the firing all angles should be removed from the back of the tooth and the sprue wire placed in such a manner as shown, and not in such a way that the molten metal is driven directly against the porcelain.

The Logan crown receives easy and very accurate adaptation by simply fitting it to the labial surface of the root, and after cutting it loose on the lingual casting gold to fill up the space.

The Davies' crown may be applied to a root, even if badly decayed, below the cervical margin by simply surrounding the pin with gold requisite to restore lost tissue, the bed for the base of the porcelain thus being gold instead of tooth structure, as in restoring a healthy root by this form of crown.

Here again the porcelain need not pass through the firing.

A crown for a very badly decayed root may be successfully made by substituting the ordinary post with wax made to conform to all surfaces. This wax may be prevented from changing its form by using a long sprue wire, one end being involved in the radicular portion of the matrix, the other end performing the ordinary function in the casting process. The illustration also shows the use of the Steele facing, in which a tag of metal has been soldered to the backing previous to its being placed in position against the root and wax matrix. Thus the post is cast along with the body of metal support on the lingual aspect of the porcelain facing.

The accompanying illustration shows the adaptation of an Ash's tube tooth to a bicuspid root, correct opposition being obtained by an intervening portion of cast gold between the root and porcelain. This is easily obtained by using a smear of vaseline to prevent the wax adhering, and thus being able to

cast without allowing the porcelain to pass through any firing.

In describing the various forms of restoration we touched upon cavity formation. May I now before concluding say a few words upon technique subsequent to this stage. It is not necessary to smear the cavity with vaseline before inserting the wax unless rubber dam is in place, as the moisture of the mouth is quite sufficient. With regard to the wax used I would be glad to hear if anyone has come across a sample which, when heated, remains plastic sufficiently long to allow of shaping to a cavity, and then hardens at the temperature of the mouth. If the wax remains plastic at the mouth temperature, it may be hardened by means of ethyl chloride on cotton to such an extent that if any impediment exists to its ready removal, this will manifest itself by a "fracture" of the matrix, and not a warping.

There are many investments upon the market, but of those I have tried Ferro-plastica has given the best surface. I am not, however, advocating its use beyond the first coating, because I think the second investment should be of less density; such an investment as sand and plaster in about equal proportions has the desired effect. If any cracking or shrinkage of this second investment takes place, it invariably happens that excess of metal flows between the two investments and never implicates the inlay. This condition may be demonstrated by allowing the first investment to set well, the second only for a short time.

Pure gold is the best form to use, because it does not absorb gases, consequently upon cooling it has no gases to evolve. If an alloy is desired for greater hardness the base metal should be copper.

I am not in any position to offer an opinion on the various machines in use, but for small work I find satisfaction in the one here shown, which has the advantage of simplicity.

The ring is heated after expulsion of the wax upon the soldering block, and steam generated from the wet asbestos in the metal disc held in the left hand and applied when the metal is molten.

## DIET AND TEETH

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BY DOROTHY RICHARDSON

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[The old story that we are living in a world of surprises is shown in this article, which deals fearlessly with a live topic.—EDITOR.]

The simpler generalizations of dental science—such assertions as, for instance, that either difficult dentition, caries or premature loss of the teeth are likely to react unfavourably upon the general health—are accepted nowadays outside the circle of the specialists among whom they arose. They have penetrated not merely into the precincts of general pathology, but beyond them, and are rapidly becoming a part of the knowledge of the public at large. In face of such events as the remarks recently addressed to the Hamburg Dental Association by the neurologist, Dr. Tromner, from the text that it is possible for a whole series of nervous disorders to derive directly from dental sources, in face of the increasing public expenditure upon dental clinics, it would seem that a general effectual recognition of the importance of the jaws and the teeth in human well-being were fairly in sight. However this may be, it must at the very least be conceded that dental science has “arrived” in the world at large, and the dental education of the medical profession and of the general public is well under way.

This educational process, this small part of the great modern spectacle of the meeting, the overlapping, the linking up and application to the life of the community of the results of the special sciences, this general dissemination of conclusions seems at first sight to be pure gain.

A closer consideration of the spectacle reveals, however, the shadow of a very real danger. It has been diagnosed long ago, long before the beginning of the municipal application of public life of the results of scientific research, and it has been called the danger of over-specialization, by which we assume is meant the risk the specialist runs of becoming the blind tool of his own science. The metaphysician, the most comprehensive of all the scientists, is never weary of reminding us of the

price each science must pay for its little garden patch of ordered knowledge; of telling us that the methodical and persistent separation of any one set of facts from the context of reality must in the end induce a lack of mental flexibility, a tendency to see things always from one point of view. It has marked out the scope and limitations of "the sciences"; proved, at any rate to its own satisfaction, that the utmost any science can do is, as it were, to diagnose matter, to collect and to classify data; that the instant it goes outside this function of statement and begins to tamper with "cause" and "effect," to try to apply its results to life as a whole, it is carried, powerless, round a vicious circle; that no conceivable pooling of the results of the various sciences, essential as they are to our progressive control of matter, will tell us anything about life.

Behind the castigations of the metaphysicians is the deep-rooted and growing popular prejudice against the specialist, an increasing impatience of accepted ideas and conclusions,—a growing tendency to keep adrift on the adventurous sea of alternatives,—and it is perhaps in venturing out sometimes upon this breezy ocean that the specialist may find not only a health-giving expansion of his being, but a positive antidote to the characteristic danger which besets his calling. It is not suggested that metaphysical aeroplaning is the only pathway to reality, but that it is desirable that we should from time to time make a practice of "scrapping" our own ideas and conclusions, of listening to the assertions of our polar opposites, of regarding our own generalization as part of a wider generalization and ceasing to be hag-ridden by our own point of view.

For example, in the present case let it be said for a moment that instead of difficult dentition "causing" nervous disturbances, bad digestion, etc., the difficult dentition and the nervous and other disturbances are all of them branches of one evil root; are all, as has been maintained, the results of mal-nutrition, of some form of starvation through over or under feeding.

That the dentist may reap the benefit of considering this point of view without necessarily entering into a consideration of the now humorous schools of dietetics has become during

the last few years increasingly clear. There is a growing body of evidence pointing to the conclusion that, whatever system of dietary be followed, there will result, provided it be faithfully followed, on the whole much the same series of benefits; in adults, an increased resisting power and the gradual relaxing of diseased conditions; in children, an exemption from sickness from birth—no tooth troubles, no infectious disorders. However great an allowance we may make for the healthy reaction upon the individual of any system whatsoever entailing thought, effort, resistance, anything, in a word, implying “controls,” still there seems very little room for doubt that the various systems, taken as a whole, spell restricted dietary, and that this is a very large part of their success. We are reaping today the result of a generation of food faddism. The pioneers are bringing up their children, and the now voluminous reform diet press of Europe furnishes, month by month, a mass of documentary evidence as to the immunity of these children from “convulsions,” teething and all other dental troubles, nervous troubles and the list of maladies which we have grown to regard as part of the regular program of childhood.

Certain important features are common to all the systems. Great stress is laid upon the necessity of distinguishing between hunger and its perversion, the nervous appetite or craving for food which is “normal” in those whose stomach has become a sac demanding repletion, and incapable of discharging its duties without the whip of highly-seasoned, sugary or in some way stimulating and varied dietary. An over-plentiful or over-concentrated “vegetarian” dietary will produce it. It seems to be the invariable accompaniment of the habitual consumption of meat, manufactured sugar or alcohol. Children of food reformers are never pressed to eat—a day or more of voluntary fasting by a healthy child is taken as a hint and not as a disaster; food is plain rather than tempting, and varied at different repasts or on successive days rather than mixed. A long interval is allowed between food and sleep, which is regarded equally with feeding as a positive process to be accomplished by a tranquil body. It is asserted by those who observe this last

rule that the tossing and restlessness so common during the early hours of a child's night do not occur.

That the importance of the "how" and the "when" is superior, within reasonable limits, to the "what" of nutrition is strikingly borne out by the observations of such men as Dr. Rabagliati, who, while holding the still exceptional position of denying that either bodily energy or bodily heat "come from" food, yet regards the nutritional function as the doorway of all the bodily ailments, and bases his practice on restriction, with results that are to the casual observer little short of miraculous.

While deprecating the adoption of any special selection of foodstuffs, he does, however, pay tribute to the fruitarians in one respect—their transformation of the phenomenon of childbirth to one of painlessness and ease. In his most recently published book he includes some statistics of "fruit babies." Most of the now commonplace characteristics of food reformers—exemption from catarrhs, viscosities, congestions, arthritism and all they imply, absence of children's diseases and feminine "ailments," immunity from infection, etc.—follow, he finds, from right behavior in the matter of nutrition.

The dental specialist may, of course, come back from all wanderings whatsoever among the results of other workers with the remark that it may all be very true, but that his concern, after all, is to deal with the results of unwisdom. Even so, is it not as well to know that there are hundreds of young families growing up in Europe who have, in practice, solved the question of why our teeth decay? May not an acquaintance with this body of evidence be of service to him when he is faced by questioning parents and guardians?

We may perhaps fitly conclude these outlined suggestions with a quotation from the last page of a controversy taking place recently in the English independent food-reform press between a reformer and an outsider on the subject of teeth.

The reformer, a fully qualified medical man, maintained that teeth decay "from the inside." The outsider protested. The reformer then explained that he meant that healthy teeth and a healthy mouth need not fear bacteria. The outsider

responded to the effect that the "cause" of caries, being nothing less than the sum of all the conditions, was impossible exhaustively to formulate; but that it was at least as untrue to say merely that the teeth decay from the inside as to maintain that the trouble was solely outside—that, in fact, the "truth" lay somewhere between the two extreme propositions. The reformer, getting the last word, discussed, first of all, the functions of lime and other salts in the development of the bodily structures, and then said:

"Bones—and here there can be no question of the lodgment of decaying food particles—are then in that condition in which microbes can attack and injure them. This is what I meant when I stated in my article that lime starvation was the primary cause of dental decay, just as it is in the case of rickets, and that the disease proceeded from within outwards.

"The microbes which abound in food particles will, I affirm, have no bad effect upon the perfectly healthy teeth of persons and children who are correctly fed. If it were otherwise no one whatever would ever have any teeth left at all. The microbe never interferes with healthy tissues; it only attacks structures starved, weakened and devitalized by wrong feeding and unhealthy modes of living. To say that microbes will not attack the part kept clean by the tongue, lips or cheeks is equivalent to stating that there are no microbes there to begin the work of destruction.

"Superficially, dental decay begins on the enamel surface of the teeth when food particles lodge upon them, thus eating into and destroying the tooth substance, but we do not infer from this that it is the cause of the trouble. It is the effect, while the cause lies deeper and in the blood.

"The point, however, I have always wished to emphasize is that all the tooth-brushing, mouth washing, etc., which orthodox dentists say is essential, will fail to arrest caries unless we, first of all, attend to the diet and general physical environment of the child."



## DENTISTS SHOULD STUDY THE HEART

BY D. R. KENDALL, M.D., L.D.S.

[The average dentist administers an anæsthetic, either local or general, oftener than the average physician, and he should have a fundamental conception of the action of the heart. The heart is the engine which must be reckoned with in the use of anæsthetics. The boiler or lungs, too, require attention.—EDITOR.]

When the doctor puts his ear to your chest, or applies the stethoscope (which only conducts the sound more clearly), what does he hear? The sound of the normal heart is like the pronunciation of the syllables "lub-dup" close to each other. These syllables are heard in quick succession, and then comes a pause—the diastole or resting period of the great force pump. The sound "lub" is that of the blood flowing out under muscular pressure, and the "dup" is the closing of the aortic valves. If this sound "dup" is not heard, it shows that the aortic valves are destroyed or not working.

The latest explanation of this first sound, "lub," is that it is caused by the muscular contraction of the heart and the impulse of the heart against the chest wall. The first sound is heard more clearly over the apex of the heart, the point of the chest nearest to the ventricle. The second sound is best heard over the aortic valves, which lie beneath the left side of the chest, just by the third rib.

If you close a door with great force the slam is very loud; and if the tension in the aorta is very high the sound "dup" is louder than usual. This is most important to the physician, for he then knows that there is high arterial tension, due to what is termed an aneurism.

If the sound "lub" is weaker than normal, it would indicate a weakness of the heart muscle, and this is the case in fevers. In typhoid fever, for instance, when this first sound is very weak we know that the heart is so weak as to make the case alarming.

A heart is said to have a "murmur" when the sharp "dup"

disappears and the listening physician hears a softened noise called a "murmur." If you try to say "dup" with your lips open, the sound uttered will be like that the doctor hears in the diseased heart whose valves do not close properly. The sound produced is something like "duff," and if the mitral valve does not work well the first syllable is softened into "luff." If both valves work poorly the sound is "luff-duff"—"luff-duff"; but if both valves are very much out of order the sound is like that of a bellows, "oho-oho."

Most persons speak of the heart as if it were a single organ; but actually it is two hearts joined together, the right and the left heart. The right sends the blood through the lungs so that it may be aerated, or acted upon by the oxygen in the inhaled air; while the left heart sends the blood through the body in order to nourish the tissues.

Both of these hearts receive the blood from the large veins into the auricles, which by contracting send the blood on into the ventricles, and when these powerful muscles contract the right ventricle pumps the blood into the pulmonary artery on the way to the lungs, and from the left ventricle into the aorta, which distributes the blood all over the body; so that, after having nourished the nerves and the muscles, it returns through the veins to the heart, there to be pumped into the lungs for purification by the oxygen before again passing through the system.

The difference in the sounds of the right and left ventricles is traced to the difference in resistance of the aorta and the pulmonary artery. The pulmonary artery resists with only one-third the strength of the aorta; so the pumping force required is less, and the noise of the closing gates is that much less.

It is true, then, that when the physician listens to the beating of a patient's heart through his stethoscope the heart speaks to him in unmistakable language. When it plainly says "lub-dup," he knows that all is well with this important organ, and he pats the patient on the shoulder, saying: "Nothing serious; you'll be all right in a day or two." When, however,

the heart says "lub-duff," he knows that the aortic valve is not working properly, and takes the proper steps to correct it. When the heart says "luff-dup," he is sure that the mitral valves are out of order, and he tries to reach them.

When the heart says "luff-duff," he draws a solemn face, for both valves are out of order; and when it says "oho-oho," he digs down into his bag and goes to work at once, for all is radically wrong.

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## SUCCESS IN DENTAL PRACTICE

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BY DR. C. N. JOHNSON

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[Dr. Johnson, editor of the *Dental Review*, has kindly consented to allow your editor the privilege of publishing extracts from his new book, and the following from chapter IV is here given. Old and young will get good advice to follow. The booklet has 160 pages, and costs \$1.25. Order through THE AMERICAN DENTAL JOURNAL.—EDITOR.]

Advise the patient always for what you believe to be the best, irrespective of your own financial relation to the matter; and when the fact that you do this becomes known, as it surely must, it will prove a strong tie to bind people to you.

The dentist should early seek to establish a community of interest between the patient and himself, so that their relationship becomes something more than a mere barter of money for professional services. He who develops an abiding friendship between himself and those who come to his office will never lack for patients, and some of the most cherished associations of a lifetime may be made in this way.

If a young man draws people to him by virtue of his inherent qualities of sturdy manhood and uniform good-will in society, they will naturally inquire into his calling, and the next step to that of their patronage is easy. But there is one feature of this that requires careful consideration. It is better always that people should not become personally too friendly or familiar with the dentist, for the reason that in the proper conduct of a practice there are always certain requirements which the dentist must demand of the patient, and to which the patient,

if approached on a strictly professional basis, will graciously accede, but which, if the dentist is a close personal friend, will not be so likely to be considered obligatory. In other words, it is more difficult to establish legitimate professional discipline with a friend than with a stranger. The one matter of appointments will serve as an illustration of what is meant. It is necessary for the dentist, in order to profitably occupy his time, to arrange for his work on appointment, and it is to him a question of considerable moment that appointments be kept punctually. With a stranger this is quickly recognized and abided by, but an intimate friend is quite likely to ignore his obligation on the ground of familiarity, and to presume on his friendship with the dentist for all kinds of laxity. As has already been said, it is better to obtain patients among strangers; and then, when they have become familiar with the business methods of the dentist, they will not depart from those methods, and can safely be made into close personal friends.

But there is nothing in all the category of professional meanness which can compare in the slightest degree with an effort to use the church as a medium of securing practice on the part of a man who otherwise has no interest in it. To pose as a church-going man, or as one who has religious motives, by an individual whose only aim is to further his business ventures, is the basest of all perfidy, and should entitle him to the hearty contempt of everyone. Hypocrisy is bad enough in any relation in life, but hypocrisy which uses the church as a cloak behind which to build up worldly interests, is absolutely beyond the pale of decency or tolerance. Unless the young man has religious instincts, or can go to church with pure motives, for the purpose of receiving mutual or moral benefit, he would better stay away; or if he desires to go as a means of mutual enjoyment, let him at least avoid assuming a sanctimonious air or taking any prominent part in the functions of the church. In other words, let him avoid hypocrisy or deceit. No matter how successful a man may seem to be at this kind of a game for a time, his sins will surely find him out, and his ultimate portion will be contempt and distrust on the part of the people.

Even if he could succeed in deceiving the people, and thereby secure their patronage, there is always behind every hypocritical act a corresponding disintegration of character in the individual himself, which ultimately will undermine the strongest personality and defeat the shrewdest aims.

Let the young man be honor-bright in every relation of life, but particularly let him avoid trafficking with things so sacred as the religious convictions of the community in which he lives. I would rather cope with an open-handed devil any time than trust for one moment the fawning pretense of a sanctimonious hypocrite. Permanent success never yet came from following unworthy motives; and of all these methods none is more detestable than the one of working the church for professional purposes.

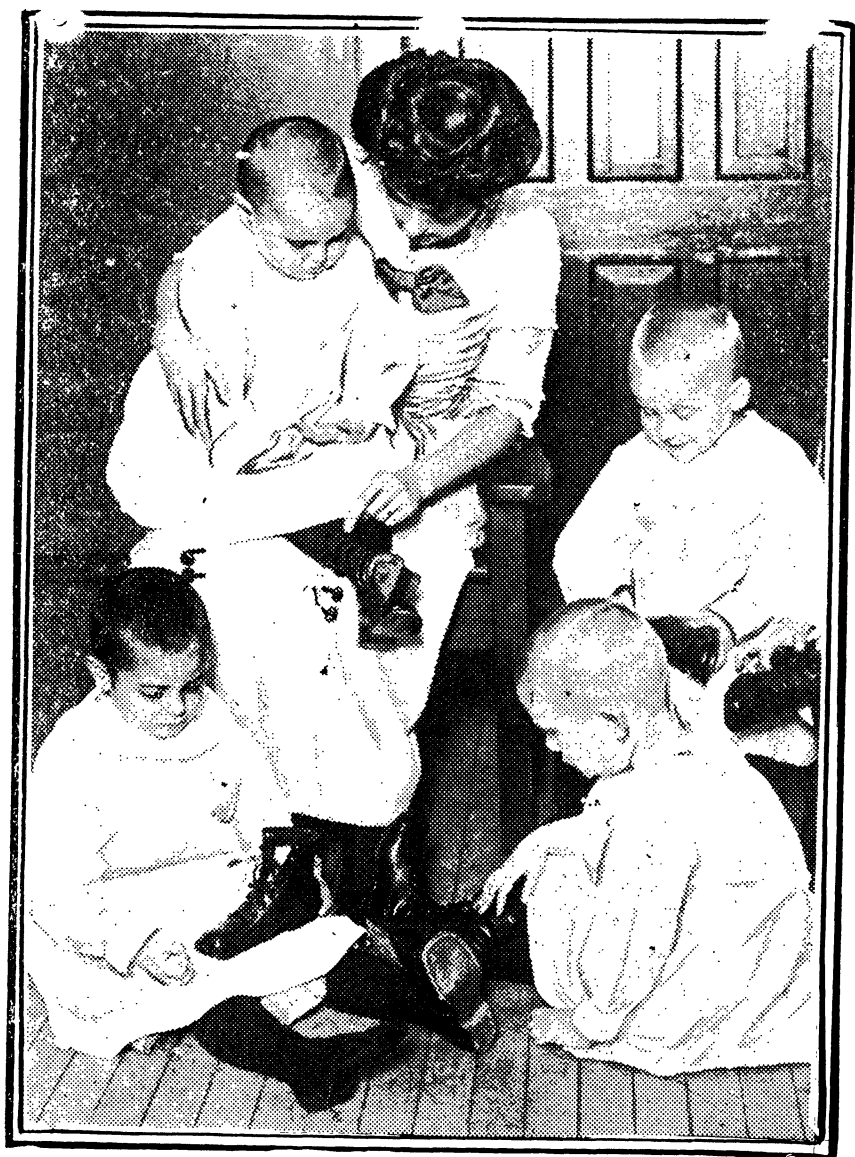
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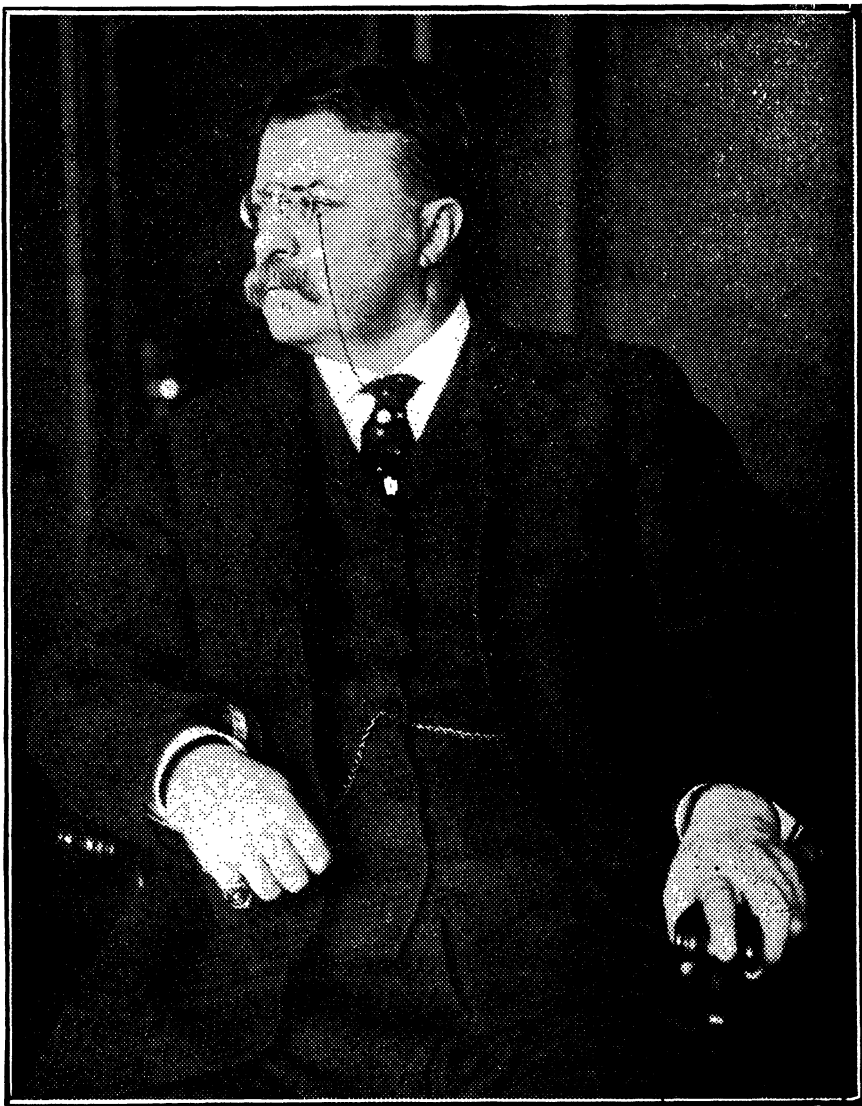
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—EDITOR.]



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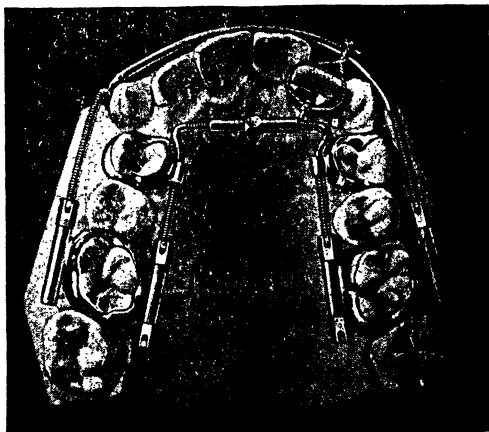
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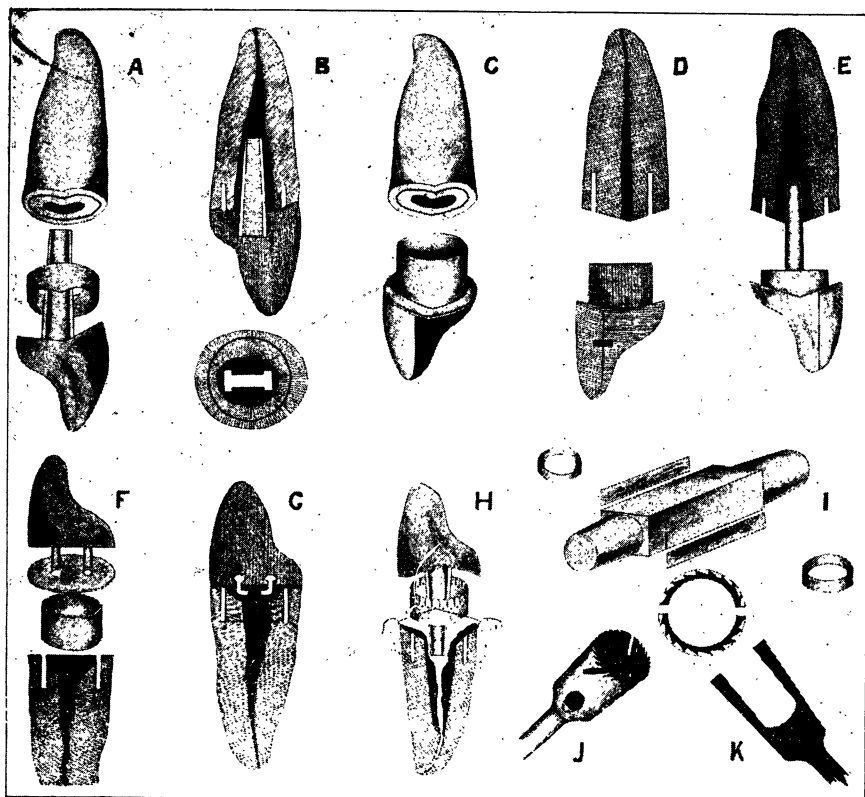
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*By Dr. B. J. Cigrand*



The above engraving illustrates the several uses of the Intra-Dental Band, as given in a clinic at the Tenth Anniversary celebration of the Odontographic Society of Chicago. Papers on this method were read at the Tri-Union Dental Meeting (Maryland, Washington, D. C., and Virginia) at Baltimore, June 3, 1898. Papers and clinics given at Illinois and Iowa State and Dental Societies.

Figs. A and B—Logan Crown, with Intra-Dental Band.

Figs. C and D—New crown, with band acting as a post.

Fig. E—Richmond crown, with Intra-Dental Band.

Figs. F and G—New porcelain crown, held by Intra-Dental Band.

Fig. H—Badly decayed root, with Intra-Dental Band.

Fig. I—Gauge-mandrel and complementary bands

Figs. J and K—New trephine for preparing and trimming roots.

Figs. I, J and K—Instruments for constructing Intra Dental Band.

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The Magazine That Helps

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No. 9

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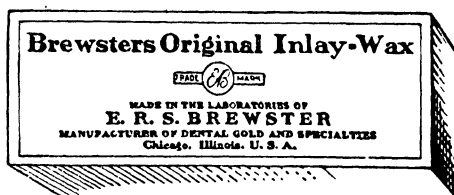
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